UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 0 9 2009



Myra Reece, Chief
Bureau of Air Quality Control
South Carolina Department of
Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Dear Ms. Reece:

Thank you for your annual ambient air monitoring network plan for the State of South Carolina, dated July 1, 2009. The ambient air monitoring network plan is required by 40 Code of Federal Regulations (CFR) §58.10. The Environmental Protection Agency (EPA) understands that the South Carolina Department of Health and Environmental Control (DHEC) provided a 30-day public comment period. Comments received and the DHEC response to the comments are included with the network plan.

Your ambient air monitoring network plan is conditionally approved, pending the Office of Air Quality Planning and Standards' review of the State's National Core (NCore) monitoring plans.

Ambient air monitoring rules, which include regulatory requirements that address network plans, data certification, and minimum monitoring requirements, among other requirements, are found in 40 CFR Part 58. Minimum monitoring requirements for criteria pollutants are listed in 40 CFR Part 58, Appendix D. Minimum monitoring requirements do not exist for carbon monoxide (CO), nitrogen dioxide ($NO_2$), and sulfur dioxide ($SO_2$) unless required by the establishment of a National Core (NCore) multipollutant monitoring station and/or a State Implementation Plan. Minimum monitoring requirements are listed for ozone ($O_3$), particulate matter less than 2.5 microns ($PM_{2.5}$), particulate matter less than 10 microns ($PM_{10}$), and lead (Pb).

The minimum monitoring requirements are based on Metropolitan Statistical Area (MSA) boundaries as defined by the U.S. Office of Management and Budget (OMB), July 1, 2008, population estimates from the U.S. Census Bureau, and historical ambient air monitoring data. OMB currently defines 10 MSAs in the State of South Carolina. These MSAs and the respective July 1, 2008, population estimates from the U.S. Census Bureau are shown in Table 1.

**Table 1: Metropolitan Statistical Areas and Populations**

| MSA Name | Population |
|---|---|
| Charlotte-Gastonia-Anderson NC-SC | 1,701,799 |
| Columbia, SC | 728,063 |
| Charleston-North Charleston-Summerville, SC | 644,506 |

| | |
|---|---|
| Greenville-Mauldin-Easley, SC | 624,715 |
| Augusta-Richmond County, GA-SC | 534,218 |
| Spartanburg, SC | 280,738 |
| Myrtle Beach-Conway-North Myrtle Beach, SC | 257,380 |
| Florence, SC | 199,831 |
| Anderson, SC | 182,825 |
| Sumter, SC | 104,148 |

After review of DHEC's ambient air monitoring network plan with respect to the applicable requirements, EPA offers the following comments and recommendations.

**Minimum Ozone Monitoring Requirements**
**40 CFR part 58, appendix D, Table D-2**

After review of the proposed network Region 4 has determined that the State of South Carolina's proposed ozone monitoring network meets or exceeds the minimum requirements found in 40 CFR part 58, appendix D, table D-2 for all MSAs.

**Minimum $PM_{10}$ Monitoring Requirements**
**40 CFR part 58, appendix A, 3.3.1**
**40 CFR part 58, appendix D, Table D-4**

After review of the proposed network Region 4 has determined that the State of South Carolinas's proposed $PM_{10}$ monitoring network meets or exceeds the minimum requirements found in 40 CFR part 58, appendix D, table D-4 for all MSAs. Also, all manual $PM_{10}$ collocation requirements are currently being met.

**Minimum $PM_{2.5}$ Monitoring Requirements**
**40 CFR part 58, appendix A, 3.2.5**
**40 CFR part 58, appendix D, Table D-5**

After review of the proposed network Region 4 has determined that the State of South Carolina's proposed $PM_{2.5}$ monitoring network meets or exceeds the minimum requirements found in 40 CFR part 58, appendix D, table D-5 for all MSAs. Also, all manual $PM_{2.5}$ collocation requirements are currently being met.

**$PM_{2.5}$ Continuous Monitoring Requirements**
**40 CFR part 58, appendix D, 4.7.2**

Regulatory requirements for continuous $PM_{2.5}$ monitoring require that "…State, or where appropriate, local agencies must operate continuous $PM_{2.5}$ analyzers equal to at least one-half (round up) the minimum required sites listed in Table D–5 of this appendix. At least one required continuous analyzer in each MSA must be collocated with one of the required Federal Reference Method (FRM)/Federal Equivalent Method (FEM)/Approved Regional Method (ARM) monitors, unless at least one of the required FRM/FEM/ARM monitors is itself a continuous FEM or ARM monitor in which case no collocation requirement applies." After review of the proposed network Region 4 has determined that the proposed $PM_{2.5}$ continuous

monitoring network meets or exceeds the minimum requirements in the all of the MSAs in the state. Also, the continuous $PM_{2.5}$ collocation requirements are currently met in all MSAs.

**$PM_{2.5}$ Background and Transport Sites**
**40 CFR part 58, appendix D, 4.7.3**

40 CFR part 58, appendix D, 4.7.3 requires that "Each State shall install and operate at least one $PM_{2.5}$ site to monitor for regional background levels and at least one $PM_{2.5}$ site to monitor for regional transport." The 2010 annual monitoring network plan identifies Ashton (AQS ID 45-029-0002) in Colleton County as a regional background site and Chesterfield (AQS ID 45-025-0001) in Chesterfield County as a regional transport site. Therefore, DHEC has satisfied the requirements of 40 CFR part 58 for regional background and transport sites.

**Pb Monitoring Requirements**
**40 CFR part 58, appendix D, 4.5**

Section 4.5 of appendix D contains requirements for lead monitoring both for sources that may contribute to violations of the Pb NAAQS (source-oriented monitoring) and in large urban areas (non-source oriented monitoring). According to the source-oriented monitoring requirement in Section 4.5(a) of appendix D, monitors must be located to measure the maximum Pb concentration in ambient air resulting from each Pb source that emits 1.0 or more tons per year (t/yr.) based upon either the most recent National Emissions Inventory or other scientifically justified method or data. Source-oriented monitoring must begin by January 1, 2010 and monitoring agencies were required to identify Pb sources that will be monitored and site locations in the annual monitoring plans submitted to EPA by July 1, 2009. According to South Carolina's 2010 network monitoring plan, no sources that emit 1.0 t/yr. or more of Pb are currently located in the state. Therefore, source-oriented monitoring is not required at this time.

Under Section 4.5(b) of appendix D, monitoring agencies are required to conduct ambient air Pb monitoring in each core-based statistical area (CBSA) with a population greater than or equal to 500,000 people as determined by the latest available census figures. Monitoring at non-source-oriented sites must begin by January 1, 2011 and monitoring agencies are required to identify which CBSAs will be monitored and the respective site locations in the annual monitoring plans submitted to EPA by July 1, 2010. The State of South Carolina is identifying its non-source-oriented Pb monitoring sites early and plans to begin sampling prior to the deadline in Section 4.5(b) of appendix D. The planned monitoring sites located in CBSAs with populations greater than 500,000 people are summarized in the following table:

**Table 2: Planned Non-source-oriented Monitoring Sites**

| MSA Name | AQS ID |
|---|---|
| Columbia, SC | 45-079-0019 |
| Charleston-North Charleston-Summerville, SC | 45-019-0003 |
| Greenville-Mauldin-Easley, SC | 45-045-0015 |

## Air Quality Index (AQI) Reporting
## 40 CFR §58.50

AQI reporting is required in MSAs with a population over 350,000. There are three MSAs in the State of South Carolina required to report an AQI: Greenville-Spartanburg, Columbia, and Charleston-North Charleston. The network plan on page 3 indicates that the daily AQI for these areas is available on EPA's AIRNow website. This satisfies the AQI reporting requirements.

## Monitoring Network Changes Proposed by DHEC

DHEC has proposed several monitoring network changes in the 2010 plan which is summarized in Table 3.

**Table 3: Monitors proposed for discontinuation**

| AQS ID | Pollutant | Type | Comments |
|---|---|---|---|
| 45-045-0008 | $PM_{2.5}$ | SLAMS | Move within MSA |
| 45-045-0015 | Pb | SLAMS | New installation |
| 45-045-0015 | $NO_2$ | SPM | New installation |
| 45-045-0015 | CO | SPM | New installation |
| 45-079-0019 | Pb | SLAMS | New installation |
| 45-079-1001 | $PM_{2.5}$ | SLAMS | Move within MSA |
| 45-063-0008 | Sulfate | SPM | Shutdown |
| 45-063-0018 | $PM_{10}$ | SPM | Shutdown |
| 45-019-0046 | Sulfate | SPM | New installation |
| 45-019-0003 | Pb | SLAMS | New installation |

The State of South Carolina has proposed to move two of its $PM_{2.5}$ monitoring sites. One move would involve relocating a monitor from the Greenville County Health Department (AQS ID 45-045-0008) to the Greenville Employment Security Commission (AQS ID 45-045-0015) site and the other move would involve relocating a monitor from the Sandhill site (AQS ID 45-079-1001) to the Parklane Ncore site (AQS ID 45-079-0007). Based upon our review of data collected simultaneously at each pair of sites during 2008, the proposed relocation of both $PM_{2.5}$ monitor sites is acceptable to EPA.

Neither of the special purpose monitoring sites that DHEC proposes to shutdown are used for meeting the minimum monitoring requirements in appendix D of 40 CFR part 58. Therefore, the proposal to discontinue these monitors is acceptable to EPA.

## National Core (NCore) Monitoring Network

DHEC has designated Parklane (AQS ID 45-079-00047) and Chesterfield (AQS ID 45-025-0001) as proposed NCore sites in the 2010 annual monitoring network plan. EPA Region 4 has submitted these proposed sites to our Office of Air Quality Planning and Standards for final approval.

Thank you for your work with us to monitor air pollution and promote healthy air quality in South Carolina and the nation. Please let us know of problems in meeting any of the requirements identified above, and if you have any questions or concerns, please contact Doug Neeley at (404) 562-9097 or David McNeal at (404) 562-9102.

Sincerely,

A. Stanley Meiburg
Acting Regional Administrator

cc: Robert Brown, Division Director
Air Planning Development and Outreach, SC DHEC

Scott Reynolds, Director
Division of Air Quality Analysis, SC DHEC

Thomas Flynn, Manager
Air Data Analysis and Support Section, SC DHEC